

Ventura’s Water Quality Summary 2006

Utilizing data collected in 2005.
Only water quality constituents detected by laboratory testing appear in the chart.

PRIMARY STANDARDS (PDWS)	Units	Maximum Level MCL	State Goal PHG	Ventura River Average	Ventura River Range	Ground Water Average	Ground Water Range	CMWD Average	CMWD Range	Major Sources of Contamination in Drinking Water
Water Clarity Treated Turbidity	NTU	TT	NA	0.11 (a)	0.09 - 0.17(a)	0.22	0.1 - 1.0	0.09 (b)	0.01-0.09 (b)	1
Radioactive Contaminants (e)										
Gross Alpha particle activity	pCi/l	15	NA	4.65	1.7 - 10.0	7.5	1.9 - 17.5	1.1	0.3 - 2.1	2
Radium 226	pCi/l	5	NA	0.10	ND - 0.23	0.50	0.12 - 0.89	NA	NA	2
Uranium (c)	pCi/l	20	0.5	3.13	2.1 - 4.0	4.8	3.8 - 6.8	NA	NA	2
Inorganic Contaminants										
Arsenic	ppb	50	0	ND	ND	ND	ND	ND	ND	3
Fluoride	ppm	2	1	0.39	0.32 - 0.45	0.51	0.40 - 0.61	0.4	0.4	4
Selenium	ppb	50	NA	ND	ND	12	ND - 40	ND	ND	5
Nitrate (as Nitrogen)	ppm	10	10	0.2	ND - .07	0.7	ND - 2.0	0.1	0.1	6
Lead and Copper Samples	Units	RAL	PHG	Samples Collected		Above RAL	90th Percentile	Major Sources of Contamination in Drinking Water		
Lead	ppb	15	2	55 (d)		1	9	7		
Copper	ppm	1.3	0.17	55 (d)		1	1.09	7		

¹ Process and source variations ²Erosion of natural deposits ³Erosion of natural deposits; runoff from orchards; glass and electronics production waste ⁴Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories. ⁵ Discharge from refineries or manufacturers; erosion of natural deposits. ⁶ Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits. ⁷ Internal corrosion of household plumbing systems.

PRIMARY STANDARDS for Distribution System	Units	MCL MRDL	PHG (MCLG) MRDLG	Distribution System Average	Distribution System Range	Major Sources of Contamination in Drinking Water
Disinfection						
Chloramine Residual	ppm	4	4	2.8	0.5 - 4.8	Drinking water disinfectant added for treatment.
Disinfection By Products						
Total Trihalomethanes	ppb	80	NA	42 (c)	1-99	By-product of drinking water chlorination.
Total Haloacetic Acids	ppb	60	NA	48 (c)	ND - 136	By-product of drinking water chlorination.
Microbiological Contaminant Samples						
Total Coliform Bacteria	NA	5%	0	0	0-1	Naturally present in the environment.
Fecal Coliform Bacteria	NA	0	0	0	0	Human and animal fecal waste.

SECONDARY STANDARDS	Units	Maximum Level MCL	Ventura River Average	Ventura River Range	Ground Water Average	Ground Water Range	CMWD Average	CMWD Range
Aesthetic Standards								
Color	Color	15	ND	ND	2.2	ND - 21	ND	ND
Odor	Threshold	3	ND	ND	ND	ND-2	1	1 - 2
Chloride	ppm	500	26	20 - 41	67	48 - 105	14	14
Corrosivity	ppb	Non corrosive	-0.13	-0.42 - 0.26	0.56	0.2 - 1.22	0.1	0.1
Iron (TT)	ppb	300	ND	ND - 0.11	ND	ND - 200	NS	NS
Total dissolved solids	ppm	1000	440	322 - 600	1268	852 - 1644	340	340
Specific conductance	umhos	1600	621	518 - 769	1704	1417 - 2210	502	502
Sulfate	ppm	500	140	117 - 168	559	379 - 896	116	116
Additional Constituents								
pH	pH units	6.5 - 8.5	7.5	7.3 - 7.7	7.5	7.2 - 8.2	7.9	7.9
Hardness	ppm	NS	263	218 - 337	621	489 - 867	205	205
Calcium	ppm	NS	69	55 - 90	168	131 - 223	49	49
Magnesium	ppm	NS	22	20 - 27	49	38 - 76	19	19
Manganese (TT)	ppb	50	ND	ND	ND	ND - 30	NS	NS
Sodium	ppm	NS	28	22 - 36	130	90 - 204	23	23
Phosphate	ppm	NS	0.41	0.19 - 1.28	0.11	ND - 0.26	NS	NS
Potassium	ppm	NS	2.4	2.0 - 2.7	4.8	3.6 - 7.0	2	2
Total Alkalinity	ppm	NS	128	111 - 179	249	205 - 278	120	120

Footnotes: (a) Average is maximum reading. Avenue Plant Surface Filtration (TT) = 0.3 NTU in 95% of samples not to exceed 1.0 NTU for more than one hour. (b) Average is maximum reading. CMWD Direct Filtration (TT) = 95% of samples equal or below 0.2 NTU (c) Highest running average cannot exceed the MCL. (d) Samples were taken at selected households on a first draw in August 2005. (e) Monitoring completed in 2003 and 2004.

Legend	Water Quality Terminology
ppm: Parts per million or milligrams per liter.	The Water Quality Summary shows constituents measured in Ventura's water and reported to the State Department of Health Services, and in some cases the USEPA. Some of the terminology used is described below.
pCi/l: Picocuries per liter; a measure of radioactivity in water.	
CMWD: Casitas Municipal Water District	
TT: A required process intended to reduce the level of contaminant in drinking water	Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary (health related) MCLs are set as close to the Public Health Goals (PHGs) or Maximum Contaminant Level Goals (MCLGs) as is economically and technologically feasible. Secondary (aesthetically related) MCLs are set to protect the odor, taste and appearance of drinking water.
ppb: Parts per billion or micrograms per liter.	
NA: Not applicable	
ND: Not detectable	
NS: No standard	
NTU: Turbidity, a measure of the clarity or cloudiness of the water.	Maximum Contaminant Level Goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to one's health. MCLGs are set by the USEPA.

WATER CONSUMER CONFIDENCE REPORT 2006

The City of Ventura welcomes this opportunity to provide you with water quality information. Ventura’s Water Division works to ensure that Ventura’s water meets or exceeds state and federal standards. This Water Consumer Confidence Report was prepared in compliance with regulatory requirements. The data presented was gathered predominantly in 2005; however, many constituents are monitored less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some data, though representative, can be more than one year old.

In order to produce, treat and distribute safe water to our customers, the City owns and operates 11 wells, three water treatment plants, 23 booster pump stations, 31 water storage reservoirs and more than 500 miles of distribution pipelines.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien. Para más información, por favor llame 652-4500. Copias del informe de agua en espanol pueden ser obtenidas llamando al 652-4500.




WATER CONSERVATION BEGINS WITH YOU!



The City’s Water Conservation Program continues to be effective in controlling water demand. As a result, residents today use the same amount of water as they did in 1973, even though the population has increased by 70%. Below are some helpful water conservation tips:.

- Instead of running the tap to get water cold, keep water in the refrigerator.
- When letting the sink or shower water run to heat up, capture this water for watering plants at your home.
- Twice yearly, check faucets indoors and out. Replace worn-out fixtures, washers and hose connections. Turn faucets off firmly.
- Cover pools and spas to reduce evaporation.
- Match washer’s load selector to your load size. Wash full loads.
- Plant water-saving plants, trees and shrubs — particularly native species. Mulch to retain water.

For more information about water conservation or to receive this document in an alternate format please contact Will Santoyo at 805/652-4567. 

Nicholas Santoyo
5th grade Poinsettia Elementary School
2006 Conserve Our Water
Coloring Contest Participant



Ventura’s water meets or exceeds state and federal primary standards.

Ventura's Water Sources

The City has three local water sources; each accounts for approximately one third of the entire water supply. A portion of Ventura's water is from the Ventura River and is pumped from four shallow wells and a subsurface collector. Water is also purchased from Lake Casitas, which is operated and treated by the Casitas Municipal Water District (CMWD), for distribution through the City system to customers. Additional water is pumped from groundwater wells located in the City's east side.

Water Treatment

All of the City's water receives treatment. Water from the Ventura River is treated by a method referred to as Conventional Surface Water Treatment. This process involves coagulation (chemical addition), flocculation (gentle agitation), sedimentation (settling particles), filtration, and disinfection with chloramines. The groundwater sources are also treated with direct media filtration to remove iron, manganese and turbidity. Additional treatment is provided at each plant to help prevent the corrosion of plumbing in your home. CMWD treats the water from Lake Casitas with direct media filtration and with chloramines for disinfection prior to delivery into the City's system.

The City uses chloramines for disinfection. Chloramines are chemicals that contain chlorine and ammonia. Chloramines were selected as the preferred disinfectant because of their ability to provide disinfection over an extended period of time, and for better taste and

fewer odors compared to using chlorine alone. Chloramines have been proven to effectively kill microorganisms while producing lower levels of byproducts such as trihalomethanes (TTHMs) and haloacetic acids (HAAs), which are potentially harmful. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

Although Chloramines are desirable in protecting the water distribution system, their use requires additional precautions for some water uses. If a member of your household requires dialysis, you should contact your physician or dialysis service provider to assure proper protective equipment is used. If you use tap water for fish or other aquatic animals that use gills for breathing, you need to test and be sure the chloramines are completely removed before use. Setting water in an open container for 24 hours prior to use will not remove all chloramines in the water. Your local pet store can provide information and products for the proper removal of chloramines. Some people who use water containing chloramines and chlorine well in excess of the Maximum Residual Disinfectant Level (MRDL), the maximum level allowed in our water systems, could experience irritating effects to their eyes and nose. Some people who drink water containing these chemicals well in excess of the MRDL could experience stomach discomfort and in the case of chloramines, anemia.

Turbidity is a measure of the cloudiness of the water. The City monitors for turbidity because it is a good indicator of water



quality and the effectiveness of the filtration processes. High turbidity can hinder the effectiveness of the disinfectants.

Water Quality Monitoring and Reporting

Ventura owns and operates a full-scale, state-certified laboratory to monitor water quality. Outside labs are also used as necessary. State-certified operators run Ventura's treatment plants. The plants have instrumentation that continuously monitors specific water constituents to ensure that the water is of high quality. Water quality constituents that were detected during 2005 are listed on the Water Quality Summary Table (see back page).

The United States Environmental Protection Agency (USEPA) through the Safe Drinking Water Act establishes drinking water standards, monitoring and reporting protocols. The California Department of Health Services (state) enforces the drinking water standards for the USEPA and has the authority to make standards more stringent if applicable to California. The City conducts monitoring beyond the minimum requirements of the federal and state regulations.

The City submits monthly and annual reports to the state for review that summarize treatment performance and drinking water quality. The state inspects the City's water system each year and submits their findings to the City. The state prepared an Engineering Report dated February 2006, and found that the sources, works, and operation are capable of producing a safe, wholesome and reliable quality of water supply. The quality of the water served and the City water system facilities and operation meet the state's standards for drinking water.

Since 2002, the City has monitored water quality along the Ventura River and San Antonio Creek for Cryptosporidium, Giardia, Bacteria, Nutrients, Bromide, Total Organic Carbon, Chloride and Conductivity. This additional testing is part of an expanded sampling program to detect potential contaminants in the watershed allowing the City to better plan future production and treatment improvements.

Water System Studies & Improvements

A Water System Master Plan is prepared every 10 years and is underway. The current plan will be completed by the end of 2006. The plan will include recommendations for capital improvements based on an analysis of water supply, distribution and quality. Current improvement projects underway include replacement of the Avenue Water Treatment Plant filtration process, evaluating Foster Park well field strategies, additional water storage on the eastside of the City, improvement of various water mains throughout the City, addition of new well capacity in the Saticoy area, emergency generators for operation of critical facilities, energy efficient electrical systems for booster stations, and expansion of the Saticoy Water Treatment Plant. The City, like other water purveyors in the country, completed a federally mandated review of its water system security. This review evaluated the water facilities and prioritized security measures that can help minimize the risk of damage or contamination. The City already has and will continue to take steps to improve the protection of City water facilities.

In April 2006 the City completed the five-year update to the Sanitary Survey of the Lower Ventura River Watershed. The purpose of the study is to identify potential sources of contamination within the watershed, to make recommendations on how to reduce risks to the water supply, and to make adjustments to the ongoing watershed monitoring program.

A separate Drinking Water Source Assessment for the City's water supplies was completed in January 2002. The purpose of the assessment is to identify existing or potential threats

to every source of supply including groundwater. No contaminants have been detected in the water supply from such surrounding sources as gas stations, agricultural drainage, dry cleaners, urban run off, sewer systems, metal plating/finishing and repair shops.

As a water supplier, the City must complete an evaluation of its drinking water supply with respect to Public Health Goals (PHG) every three years. The goals are advisory only, requiring public notification, and are not mandatory limits. The City completed the last evaluation in 2004, which determined that six chemicals, although well below the maximum contaminant level limit, exceeded a PHG. These were lead, copper, uranium, gross alpha & beta particles, and radium 226. Copper and lead can be found in water as a result of the corrosion of plumbing fixtures used in most homes. The City has conducted tests to optimize its treatment with corrosion inhibitors in an effort to further reduce lead and copper levels. High levels of lead can result in kidney problems or high blood pressure, and delays in physical and mental development in children. High levels of copper are known to cause gastrointestinal disturbance and kidney damage. The remaining four chemicals are naturally occurring radioactive isotopes that typically occur in drinking water by the erosion of natural deposits and are considered carcinogenic. Noncarcinogenic effects of uranium on the kidneys and the liver have been documented. Radium is known to cause tumors.

Potential Concerns

In order to ensure tap water is safe, the United States Environmental Protection Agency (USEPA) and the California Department of Health Services prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The City of Ventura treats its water to meet these regulations. The regulations of the Food and Drug Administration establish limits for contaminants in bottled water, which must provide the same protection for the public health.

Drinking water, including bottled water, may contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791. Sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up contaminants resulting from the presence of animals or from human activity.

Contaminants that *may* be present in source water include:

- Microbial contaminants, such as viruses and bacteria from sewage treatment plants, septic systems, agriculture and livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides from a variety of sources, such as agriculture, urban stormwater runoff and residential uses.

- Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.

Some people are more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals, such as people with cancer, those undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people and infants can be particularly at risk from infections and are at greater risk of developing life-threatening illnesses. The City encourages immuno-compromised individuals to consult their doctors regarding appropriate precautions to avoid infection.

The City takes precautions to eliminate the risk of infection from microbial contaminants, including

Giardia and Cryptosporidium, from its water system. The new membrane filtration improvements being installed at the Avenue Treatment Plant are effective at removing these contaminants.

These organisms are found in surface water throughout the United States and ingesting them may cause an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. The City has been sampling for possible risks present in the Ventura River Watershed since 2000. The City's current treatment processes for surface water include coagulation, filtration and Chloramine disinfection to remove these organisms. The USEPA and the Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial contaminants are available from the Safe Drinking Hotline at 1-800-426-4791.

For More Information

If you would like more information regarding the City's water quality or studies, please contact Ventura's Water Superintendent at 652-4500. This Water Consumer Confidence Report is also available on the City's website at www.cityofventura.net

You are invited to express your opinions at City Council meetings held each Monday at 7 p.m. in the Council Chambers at Ventura City Hall, 501 Poli Street.

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